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ABSTRACT

A project-wide evaluation of the Houston, Texas magnet school program indicated that it successfully implemented four court-defined desegregation goals: (1) fewer schools which are 90% or more white or combined black and Mexican-American; (2) fewer students who attend such schools; (3) free transportation for magnet school students; and (4) an ethnically balanced instructional staff. Data reported by the 50 individual magnet schools and substantiated by program audits and site visits indicate that the program provided high quality alternative educational programs which attracted students from all geographic and ethnic sectors of the district. The programs represent grades pre-K through 12. Of the 231 proposed objectives, 36 were not accomplished. Some of these objectives were in areas of primary concern, such as recruitment and enrollment, overall academic achievement, and achievement in the magnet schools's specialty area. Achievement gains on magnet campuses were significantly greater than on non-magnet campuses, for grades 3 to 4; there were no significant differences at other grade levels. Responses of 2,931 students, parents, teachers, and administrators were not overwhelmingly positive toward the program; many respondents felt the public had inadequate information. The Magnet Program was, however, much more successful than previous district integration plans--freedom of choice, school pairing, and the Singleton ratio. (CP)

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AN EVALUATION OF HOUSTON'S MAGNET SCHOOL PROGRAM

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ABSTRACT

The Houston Independent School District, one of the nation's largest public school districts, operated as a dual school district until the late 1950's. Since that time, the District has undertaken a cycle of desegregation activities not unlike that of most other Southern school districts. This cycle has included: grade a year transfer (1960), freedom of choice (1967), Singleton Ratio staffing (1970), and school pairing (1971). None of these activities achieved the desired results.

In the fall of 1974, the Board of Trustees commissioned a citizens Task Force on Quality Integrated Education to recommend alternatives to school pairing as a desegregation activity. The recommendation of the Task Force was the establishment of a network of Magnet Schools. This recommendation was taken to Federal District Court in the Spring of 1975 and approved by the Court in July of 1975 for implementation in September of 1975.

Since September of 1975, a total of 50 Magnet Schools have been established and operated by the Houston Independent School District. Evaluation of the accomplishments of the Magnet School program indicate that, compared to school pairing, Magnet Schools have: lowered the number of racially isolated schools, lowered the number of students attending school in racially isolated situations, provided transportation to all eligible Magnet School students, accomplished a majority of their program objectives, and had a positive impact on Magnet School students' achievement in basic skills. Overall, Houston's Magnet School program may be considered successful.

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AN EVALUATION OF HOUSTON'S MAGNET SCHOOL PROGRAM

The Houston Independent School District is one of the six largest public school districts in the United States and the largest in the South. It is located in southeast Texas in a region referred to as the Upper Texas Gulf Coastal Plain about fifty miles northeast of the Port of Galveston on the Gulf of Mexico. The Houston Independent School District is made up of 312 square miles which occupy the center of both the City of Houston and Harris County. The district has a student enrollment of approximately 207,000 which is truly multiethnic as it is 1% Asian, 44% Black, 32% White and 23% Hispanic. These student body figures represent 48% of the total student enrollment in Harris County and 85% of the county's minority student enrollment.

The greater Houston area is a rich, rapidly growing metropolitan area. Approximately 90,000 new persons move into the area annually, not including an estimated 10,000 undocumented aliens annually. Since HISD's total student enrollment is fairly stable, it is obvious that most of the influx has been into suburban areas.

The annual general operating budget of the Houston Independent School District is made up of about 251.5 million local and state dollars and about 20 million federal dollars. These funds support the functioning of 233 school buildings plus administrative, athletic and support facilities. The district's 10,500 plus teachers are assisted by approximately 600 administrators and 5,000 service and support personnel. The district operates effciently as evidenced by the fact that it is blessed with an approximately 20 million dollar annual fund balance.

HISTORY OF DESEGREGATION IN HOUSTON

Prior to the United States Supreme Court decisions in Brown vs The Board of Education, the Houston Independent School District existed as a dual school system. That is, there were specific schools reserved for Black students only. Following the Brown I and II rulings, HISD went through a cycle of desegregation activities similar to that of most other southern school sytems. The most recent of these activities has been an extensive Magnet School Program.

The Houston Independent School District (HISD) began school desegregation in the fall of 1960 when it implemented a grade per year transfer plan. Subsequently, the District has engaged in other methods to achieve integration; e.g., freedom of choice (1967), school pairing (1971), and the Singleton ratio (1970). None of these methods achieved the desired results.

When the twenty-two schools in the Houston Independent School District were paired in September of 1971, the enrollment in the twenty-two schools was 16,733. By 1975, the enrollment in the twenty-two paired schools was 15,419. The enrollment in the total District at the time of pairing was 231,922. The enrollment of students in Houston schools as of February 1, 1975, was 210,117.

The drop in enrollment of paired schools and the total District reflected a drop in population of families with school age children. In order to curb "flight" and attract new families to Houston, it was imperative that quality educational opportunities be designed.

The pairing of schools affected 9,957 black students, 4,923 brown students, and 539 white students. Mexican-American or brown students in 1970 were counted as "white." This classification implied that minority students were paired with majority students. In reality, minority students (black) were paired with minority students (brown). In paired schools where white students were in attendance, there was an exodus of some whites resulting in blacks being paired with other black schools. For example, in Frost Elementary, there were initially 375 white students in attendance in 1970. The total number of white students in Frost Elementary and its paired school, Rhoads Elementary, became twenty-two. The pairing of schools hardly promoted integration.

The HISD Magnet School Program Phase I was formally implemented with the beginning of the 1975-76 school year in compliance with the Amended Decree of September 18, 1970, by the United States District Court for the Southern District of Texas, Houston Division. This action, designated Civil Action No. 10444 and dated July 11, 1975, provided for the depairing of twenty-two elementary schools ordered paired by the United States Court of Appeals for the Fifth Circuit, the restoration of the paired schools' original equidistant zone lines, and the implementation of the Magnet School Plan.

DEVELOPMENT OF HOUSTON'S MAGNET SCHOOL PROGRAM

The Magnet School Program in Houston did not just spring up over night. It began with an action by the Board of Trustees of the Houston Independent School District which established a Task Force on Quality Integrated Education. This task force, established in December, 1974, was directed to seek out and recommend an alternative or alternatives to forced school pairing as a desegregation activity for the Houston Independent School District. Interestingly, this task force was made up entirely of community people. The community leaders were provided with a budget by the Houston Independent School District's Board of Trustees, and they visited several cities with successful desegregation plans in operation. Not all of the cities visited used Magnet Schools; in fact, a very few of them did; but these few cities were those that the task force felt had the most exciting and truly successful plans for integrating students of different ethnic groups.

In February, 1975, the task force presented the Board its initial recommendations. The primary recommendation was that the Houston Independent School District establish a network of alternative programs which would, by the nature of the programs, attract students of all ethnic groups from all areas of the district to centers of academic excellence. The task force felt that if such centers of excellence, providing high quality instruction in specified areas as well as in the basic skills could be developed, they, like a magnet, would draw students of the "proper polarity" regardless of the ethnic group, thus creating quality education in integrated situations.

Soon after the task force made its initial recommendations, the Board of Trustees of the Houston Independent School District, established an administrative support team to assist the task force in putting its recommendations into action. This support team, headed by an assistant superintendent and made up of principals, counselors, and instructional

specialists from throughout the District, was charged with the responsibility of designing programs which would qualify under the task force's"center of excellence" ideas as well as be economically feasible. The support team was to draw up initial program specifications, objectives and action steps, budgets and establish procedures whereby personnel could be appointed to these programs and students could be recruited.

When the administrative support team had finished its work, the "Green Book" was presented to the Board. This Green Book contained the initial program designs and installation budgets for approximately 40 Magnet programs. The Board of Trustees adopted the Green Book and selected from it 34 programs to be implemented during the 1975-76 school year, pending Federal Court approval of the plan. The Board of Trustees then instructed its legal representatives to present this new plan to the Federal District Court as an alternative to the shool pairing plan involving only 22 schools within HISD which was presently in force. To our knowledge, this is the first time that a local school district has gone to the Federal District Court when not at litigation to present an alternative desegration plan to replace a plan presently being adhered to and legally successful.

The Federal District Court heard the District's argument, took it under advisement and made no ruling until mid-July, 1975. On July 12, 1975, the Federal District Court approved substitution of the recommended Magnet School Program for Houston's school pairing plan. This adoption date gave the District five weeks to dismantle a pairing plan involving 22 schools, hire 32 Magnet School staffs at 29 different campuses, to market the programs and fill the programs with students.

The Magnet School Plan as presented to the court and subsequently approved in July, 1975, contained four action statements summarized as follows:

1. Reduce the number of schools which are 90% or more white or combined black and brown;

2. Reduce the number of students attending schools which are 90% or more white or combined black and brown;

3. Provide free transportation upon request to all students attending Magnet School outside their regular school attendance zone;

4. Report student enrollment and teacher assignment by ethnic group in each Magnet School biannually.

To assist in initial implementation, a small portion of the original administrative support team was kept on board for the first year of the Magnet School Program's operation. These six people, three field information coordinators, two Magnet School program administrators, and an assistant superintendent, took care of all central office paperwork involving the establishment of the Magnet School Program. This included establishing transportation routes in a district which, in the past, had transported primarily students who were mentally or physically handicapped.

The Board of Trustees felt that its credibility with the public and the credibility of the Magnet School Program with its patrons were of paramount importance. Therefore, a separate Magnet School evaluation team was established within the District's Department of Program Planning, Research and Evaluation. This team was to maintain an ongoing

planning and evaluation effort in all Magnet Schools. Additionally, an outside consulting firm was hired to assist the programs in establishing workable, meaningful outcome objectives for the students and to provide an educational audit for the first year of program operation. These activities have since been taken over by the District's Magnet School evaluation team.

EVALUATION DESIGN

The evaluation of the Houston Independent School District Magnet School Program is objective-based and conducted in three distinct phases. Each Magnet School conducts an internal evaluation based on the specific objectives of the program. The resulting internal evaluation reports are submitted to Program Planning, Research and Evaluation for compilation and publication. This internal evaluation is audited by personnel from Program Planning, Research and Evaluation (hereafter PPRE). Two formative external audit reports are submitted annually by PPRE, dated November and March. A summative external audit report, including recommended program modifications for the following school year, is submitted in July. Since the specific objectives for each program addressed by the internal evaluations and verified by the external program audits did not directly address the action statements defined by the District Court, an overall Magnet School project evaluation addressing these action steps was undertaken. The section which follows is the report of this project-wide evaluation.

EVALUATION RESULTS

Much of the data upon which this report is based was drawn from the internal evaluation reports prepared by the individual Magnet School programs and the external audit reports prepared by PPRE. Taken singly, the objectives reported in these source documents only tangentially addressed the District Court-defined action steps. The summation of results across programs allowed for determinations to be made related to the degree to which the Magnet School project was successful in implementing the four court-defined action steps. In order to facilitate decision-making based on this report, each of the four court-defined action steps was addressed individually with all data related to the action step summarized in a single section of the report. Additional analyses of interest are also included. In most cases, the data reported are those collected at the conclusion of the 1976-77 school year. Where there are exceptions, notations to that effect are presented.

The first action step delineated in the District Court decree of July, 1975, may be summarized in the following manner:

> "Reduce the number of schools which are 90% or more white or combined black and brown."

In order to determine whether or not this action step has been met, it is necessary to consider the number and proportion of schools which were ethnically isolated (i.e., 90% or more white or combined black and brown) at four points in time. The success of the Magnet School Program is determined in reference to the school pairing plan which it replaced; therefore, the last year of school pairing (1974-75) must be compared to Phase I (1975-76), Phase II (1976-77), and Phase III (1977-78), of the Magnet School Program. The number and percent of schools classified as racialy isolated, by school level, at the four points in time specified are presented in Table I.

Table I

NUMBER AND PERCENT OF RACIALLY ISOLATED SCHOOLS
BY SCHOOL LEVEL IN EACH OF FOUR SCHOOL YEARS

	1974-75		1975-76		1976-77		1977-78	
	N	%	N	%	N	%	N	%
Elementary	89	52.4	80	47.3	77	45.5	74	43.5
Junior High	18	50.0	16	44.4	14	38.8	14	36.8
Senior High	14	60.9	13	56.5	12	52.2	10	37.0
TOTAL	121	52.8	109	47.8	103	45.2	98	41.7

*Includes four Magnet or Alternative campuses not previously included.

It is evident in Table I that the reduction in the number of racially isolated schools has been fairly well distributed across school levels. That is, the effect of District desegregation efforts has been felt at all school levels.

Since there have been slight adjustments in the number of campuses since the 1974-75 baseline period, changes in the number of racially isolated schools may be specious. To overcome this change in numbers, the percent of campuses racially isolated at the four check points above is also presented in Table I.

Both the number and percent of schools classified as racially isolated at the school level declined from 1974-75 to 1977-78. By the 1977-78 school year, a total of 23 fewer schools were classified as racially isolated than were so classified under the court-ordered school pairing plan in effect in the 1974-75 school year. While this decline was not found to be statistically significant, it does represent a move away from ethnic isolation in HISD at all school levels. It may be therefore concluded that the Magnet School project has successfully met the first court-defined action step.

The second action step delineated in the District Court decree of July, 1975, may be summarized in the following manner:

> "Reduce the number of students attending schools which are 90% or more white or combined black and brown."

The District Court defined action steps also speak to the reduction of the number of students in racially isolated schools. In the 1974-75 baseline figures, 114,143 students attended racially isolated schools. By October, 1976 this number had been reduced by 17,125 to 97,018. The October, 1977 TEA Survey indicates that only 93,203 students attended racially isolated schools this fall; a reduction of 3,815 when compared to fall 1976 and 20,940 fewer than the 1974-75 baseline figures. District enrollment has changed, of course, across the four check points; therefore, examination of the percent of students in racially isolated schools is more meaningful. The percent of students enrolled in racially isolated schools is presented in Table II.

TABLE II

Percent of Students in Racially Isolated Schools in 1974-75, 1975-76, 1976-77, and 1977-78

	1974-75	1975-76	1976-77	1977-78
Elementary	57.6%	52.6%	50.8%	50.1%
Junior	46.3%	40.8%	37.2%	37.5%
Senior High	56.9%	55.8%	48.9%	39.9%
TOTAL	54.7%	50.2%	47.0%	45.0%

The percentages presented in Table II indicate that fewer students are attending school in racially isolated situations now as compared to the 1974-75 baseline period. The percent of the District's students attending school in racially isolated situations has now fallen below 50% to 45.0%. A total enrollment of 206,998 was used in calculating this overall percentage for 1977-78.

Statistical analysis to determine the significance of this change in percent of students attending racially isolated schools from 1974 to 1977, i.e., from 54.7% to 45.0%, indicates that the change is statistically significant ($Z=96.739$, $p < 0.0001$). A second analysis to determine the significance of the change from 1976 to 1977, i.e., from 47.0% to 45.0% indicates that this change is also statistically significant ($Z=11.675$, $p < 0.0001$). The level of statistical significance in both analyses further indicates that the probability of such a change occurring due to chance alone is less than 1 in 10,000. We can therefore feel sure that recent District efforts in desegregation including Magnet Schools, are making a significant impact on the number and percent of students attending school in racially isolated situations. It may be concluded that the Magnet School Program has successfully met the second court-defined action step.

The third action step delineated in the District Court decree of July, 1976, may be summarized in the following manner:

> "Provide free transportation upon request to all students attending Magnet Schools outside their regular attendance zone."

The massive task of transporting students from points all across the 312 square miles of HISD to the Magnet Schools of their choice was far from a simple task. Transportation problems were less severe in the 1977-78 school year than was true in any prior school year. At least a part of the reason for the improvement in transportation for Magnet Schools may be the increased number of transportation units available. The Transportation Department began in 1975-76 school year with a total of 357 operational units. The units ranged in size from fourteen passenger vans to sixty-six passenger buses. New transportation units were purchased and old units retired throughout prior school years. The result of these actions was a net increase in the number of transportation units of 131 to a total of 488 units available at the opening of the 1977-78 school year.

The District Court decree allowing implementation of the Magnet School project obligated the District to supply free transportation to students attending Magnet School outside their regular attendance zone. Thus, only "interschool" transfer students were eligible for free transportation. The students were assigned to 270 Magnet School and Majority-to-Minority transfer routes. Each of these routes was reported by the Transportation Department to serve an average of 27.08 students and to cover 55.13 miles. The regular District bus routes served an average of 111.65 students and covered an average of 36.26 miles. Using an average cost per mile of $0.68 for bus transportation, Magnet School transportation had an average cost of $249.19 per pupil compared to an average cost of $39.75 per pupil for other District bus transportation. It is assumed that the 13.2% of eligible students who did not use the District transportation available to them used public buses, private buses or private cars to go to and from their selected Magnet Schools.

It is evident that, although there were several transportation problems resulting in the loss of some students early in the school year, the District did provide free transportation for students attending Magnet Schools outside their regular attendance zone. The per pupil cost of providing this transportation to eligible Magnet School students was 526.9% higher

than the per pupil cost of providing transportation to other eligible students in the District. It may be concluded that the Magnet School project has successfully met the third court-defined action step.

The fourth action step delineated in the District Court decree of July 11, 1976, may be summarized in the following manner:

> "Report student enrollment and teacher assignment by ethnic group in each Magnet School biannually."

This court defined action step requires two general analyses; one of student enrollment and one of teacher assignment. Each of these analyses must be reported by individual campus. For the purposes of this evaluation report, only summary data will be offered.

In December, 1977, a program-wide total of 12,011 students were enrolled as full-time students in Magnet Schools in the Houston Independent School District. A total of 4591 Black students (38.2% of the program-wide total), 3416 Mexican-American students (28.4%), and 4004 other students (33.4%) were enrolled in Magnet Schools. These enrollment figures clearly indicate the multiethnic make-up of the Magnet School program in Houston. The ethnic make-up is somewhat different than that prescribed by the District Court. The court mandated that each Magnet School should have a student body which matched in ethnic make up the student body of the district as a whole. The mandated ethnic make-up would be, therefore, 44% Black, 23% Mexican-American, and 33% other. Considering the mobility of this metropolitan area, it is easy to understand the difficulty with this element of the District Court order under which HISD operates; the ethnic make-up changes each year.

In addition to the 12,011 full-time students in Magnet schools, 26,950 students participate in part-time Magnet Schools. Ethnic make-up is totally controlled in the part-time programs, so that it matches the district's ethnic make-up almost exactly. Part-time Magnet Schools are designed to teach a narrow range of content, in a short time, to students from campuses which are racially isolated or imbalanced. Examples of the content taught in part-time Magnet Schools include international trade, children's literature, career awareness, and outdoor education/camping.

Campuses on which Magnet Schools are located receive several benefits from the Magnet School program. Pupil/teacher ratios on these campuses are lowered to below 25 to 1. Additional curriculum specialists are assigned to Magnet School campuses and additional material and supplies are alloted to them. Students who attend school on a campus which also houses a Magnet School share in these benefits. A total of 17,501 students receive these indirect Magnet School benefits.

Districtwide, the education of a total of 56,462 students is impacted by Houston's Magnet School program. These students represent 27.3% of the district's total student enrollment. These data, together with data related to individual Magnet Schools, indicate that the Magnet School program was successful in attracting and serving a multiethnic student population.

The fourth action step decreed by the Federal District Court called not only for the reporting of Magnet School student enrollment, but also for the reporting of Magnet School teacher assignment. The expressed goal of the Magnet School program is to provide quality integrated education. Such a goal implies that faculties, as well as student bodies, will be ethnically balanced. The "Singleton Ratio" established by the Federal Courts in 1970 states, in effect, that the faculties assigned to each of the District's campuses must be made up of approximately one-third black teachers and two-thirds non-black teachers. This mandatory staffing ratio has severely limited the District's ability to meet its implied goal of providing students in Magnet Schools with ethnically balanced instructional staffs. Ethnic imbalance in the Magnet School instructional staff was reported in the Magnet School Project Evaluation: First Annual Report 1975-76 and was noted again in 1976-77. The ethnic make-up of the Magnet School project teaching and coordinating staff for the 1976-77 school year is displayed in Table III which follows.

Table III

Ethnic Make-Up of Magnet School
Instructional Staff

	BLACK				MEXICAN-AMERICAN				OTHER			
	75-76		76-77		75-76		76-77		75-76		76-77	
	N	%	N	%	N	%	N	%	N	%	N	%
Coordinators	10	29.4	14	30.4	2	5.8	2	4.2	22	64.7	31	63.0
Teachers	70	30.4	146	33.3	30	12.0	27	6.3	144	57.6	257	60.3
Total	86	30.2	156	33.0	32	11.2	29	6.1	166	58.4	288	60.8

The data presented in the preceding table indicates that the staffing imbalance noted in the first project year (1975-76) persisted during the second project year (1976-77). Roughly two-thirds of the instructional coordinators were of an ethnic group other than Black or Mexican-American. Furthermore, over one-half of the Magnet School teachers were of an ethnic group other than Black or Mexican-American. The proportion of instructional staff members classified as "other" has increased during the second project year from 58.4% to 60.8%. The proportion of instructional staff members classified as Black has increased from 30.2% to 33.0%. The proportion of Mexican-American instructional staff members has decreased markedly from 11.2% to 6.1%. More important, the total number of Mexican-American instructional staff members has decreased from 32 to 29 even though the number of Magnet School programs has increased from 34 to 46.

Itis evident that the Magnet School project was fairly successful in creating and maintaining integrated student enrollments. Federal District Court rulings specifying a staffing ratio for the District have limited the District's ability to create truly ethnically balanced instructional staffs. Overall, it may be said that the Magnet School project has been able to create and maintain integrated educaitonal settings. It may be concluded that the Magnet School project has successfully met the fourth court-defined action step.

The four court-defined action steps were met during Phase II of the Magnet School project. It is apparent from the data presented that there has been a reduction in the number of ethnically isolated schools and in the number of students attending ethnically isolated schools during the two years of Magnet School project operation. Additionally, free transportation for Magnet School transfer students and ethnically balanced alternative educational programs were provided.

The court-defined action steps are intended to guarantee a degree of desegregation within the Houston Independent School District. They do not speak to the quality of the instructional program at any Magnet School. Each Magnet School instructional program was defined in performance objectives which were approved by the Instructional Division and presented to the Board of Trustees as appropriate and valid objectives. The specific objectives of each Magnet School program and the degree to which these objectives were met are discussed in the individual Magnet School's Internal Evaluation Reports and in the Magnet School Project Audit Final Report. These two documents were finalized and distributed in July, 1977. A brief discussion of the total number of objectives proposed, accomplished and specific problems encountered lends insight into the quality of the Magnet School project as a whole.

A total of 231 objectives for the 46 Magnet School programs were approved for the 1976-77 school year. This is in contrast to the 232 program objectives approved for 32 Phase I MagnetSchool programs for the 1975-76 school year. At a single school the number of objectives ranged from 2 to 12 in 1976-77. The average number of objectives was 5. The number of objectives in the 1975-76 school year ranged from 2 to 33 and the average number of objectives was 6. Thus, even though the number of programs increased in 1976-77 the number of objectives remained approximately the same.

Objectives were most frequently written in the areas of recruitment (enrollment), academic achievement, parent/community involvement, average daily attendance, attitudes toward the Magnet program and achievement in the Magnet School's program area (e.g. music, fine arts, ecology, physical development, etc.). The 46 Magnet Schools which operated during the 1976-77 school year reported having 195 of the 231 proposed program objectives. This represents an 84.4% success rate.

A total of 36 of the 231 proposed objectives were not accomplished. These 36 objectives were in the areas of recruitment and enrollment of students (15), academic achievement (11), achievement in the Magnet School's speciality area (6), average daily attendance (3), and students' attitude toward program (1). As can be seen, 32 of the 36 objectives which were not met were in the areas of recruitment and achievement, both academic and program area.

Recruitment is of primary concern. Of the 25 schools having recruitment objectives dealing with attainment of the District ethnic ratio, 9 or 36% were unable to meet this objective. A lack of coordination of recruitment activities within and among the Magnet School programs was evident during this school year. The job description of Magnet School instructional coordinators specifically addresses recruitment as a major function of this position. There is some doubt as to the quantity and quality of recruitment efforts at many of the Magnet Schools.

Achievement, academic and program area, is the second area of concern. In many cases criterion levels were set exceedingly high, making the probability of success low. In other instances, students' capabilities were perhaps misjudged, making achievement difficult.

In many objectives, achieved or not, a lack of concordance among the objectives, supporting activities and evaluation plans was evident. Decisions that an objective was not met may in some cases be based on the fact that the data reported by program personnel did not speak to the objective under consideration.

The quality of the Magnet School programs is reflected in the 84.4% of the 231 proposed objectives were attained during the 1976-77 school year. It may be concluded that the Magnet School programs were successful in meeting the various proposed program objectives.

Magnet Schools in the Houston Independent School District are intended to provide quality education in integrated settings. The integration effects of Magnet Schools in the Houston Independent School District have been very positive. While it is generally accepted that Magnet Schools offer high quality educational opportunities to students in their specialty areas, e.g., fine arts, foreign language, etc., questions have been raised as to the effect of Magnet Schools on student advancement in the basic skills.

Several sources of information are available which allow the determination of the effects of Magnet Schools on student achievement in the basic skills. The information source selected, Elementary School Profiles 1976-77, was chosen for two reasons. First, it is a widely available document. Second, it summarizes programmatic, demographic, and achievement data for each school in a single document. Utilizing the data available in Elementary School Profiles 1976-77 made it possible to determine statistically whether differences in student achievement gains existed between Magnet and non-Magnet Schools.

The procedures followed in analyzing the data were fairly simple. The enrollment, ethnic make-up, and achievement growth data on each HISD elementary school was taken from Elementary School Profiles 1976-77. The schools were then divided into Magnet and non-Magnet campuses. A school was classified as a Magnet campus if a Magnet School program was located on the campus. It was felt that such a classification was necessitated by the indirect benefits offered by the Magnet School project including, for example, lower pupil/teacher ratio. A total of 29 elementary schools were classified as Magnet campuses and 139 elementary schools were classified as non-Magnet campuses. The results which follow are based on the statistical comparison of these two groups.

Prior to analyzing achievement data for the two groups of schools, the enrollment and ethnic make-up were compared. School size and ethnic make-up are often cited as being major contributors to differences in student achievement. Tables IV and V below display the comparative enrollments and ethnic make-ups of Magnet and non-Magnet campuses.

Table IV

Enrollments of Magnet and Non-Magnet Campuses

	Range	Mean	F	P
Magnet	382 to 921	619.0	2.271	N.S.
Non-Magnet	113 to 1,562	713.1		
All Campuses	113 to 1,562	696.9		

Table V

Ethnic Make-Up of Magnet and Non-Magnet Campuses

	Black	Mexican-American	Other	Chi-Square	P
Magnet	40.4%	24.4%	35.2%	0.553	N.S.
Non-Magnet	40.6%	26.7%	32.5%		
All Campuses	40.5%	26.3%	32.9%		

The data presented in Tables IV and V indicates that Magnet and non-Magnet campuses are not significantly different in a statistical sense as to enrollment and ethnic make-up. Looking at the data in non-statistical manner, we can see that Magnet campuses tend to have enrollments in the middle of the districtwide range (i.e., about 400 to 900 for Magnet campuses, districtwide range about 100-1,600). They tend to have smaller enrollments than non-Manget campuses (619 on Magnet campuses and 713 on non-Magnet campuses). Magnet campuses also tend to be more balanced in ethnic make-up than non-Magnet campuses. However, it must be said in summary that Magnet and non-Magnet campuses are not significantly different in enrollment or ethnic make-up.

The achievement growth of students enrolled on Magnet campuses was then compared to that of students enrolled on non-Magnet campuses. The analysis was carried out using the three achievement growth scores reported for each school in Elementary School Profiles 1976-77. The growth score was determined by comparing 1977 mean composite scores for each grade level at each school to the 1976 score for the preceding grade level in that school. The three achievement growth scores reported represent the change from grades 3 to 4, 4 to 5, and 5 to 6. Magnet and non-Magnet campuses were compared on each of the three reported achievement growth scores. The results of these analyses are displayed in Tables VI, VII and VIII below.

Table VI

Achievement Growth from Grades 3 to 4
Magnet and Non-Magnet Campuses

	Range	Mean	F	P
Magnet	0.58 to 1.69	0.96		
			3.99	0.047
Non-Magnet	0.03 to 1.38	0.85		
All Campuses	0.03 to 1.69	0.87		

Table VII

Achievement Growth from Grades 4 to 5
Magnet and Non-Magnet Campuses

	Range	Mean	F	P
Magnet	0.28 to 1.47	0.90		
			1.464	N.S.
Non-Magnet	0.05 to 1.55	0.83		
All Campuses	0.05 to 1.55	0.84		

Table VIII

Achievement Growth from Grades 5 to 6
Magnet and Non-Magnet Campuses

	Range	Mean	F	P
Magnet	0.35 to 1.54	0.91		
			1.322	N.S.
Non-Magnet	0.19 to 2.17	0.98		
All Campuses	0.19 to 2.17	0.97		

Examination of the data presented in Tables VI, VII and VIII reveals that student achievement growth on Magnet campuses is significantly greater ($p < .05$) from grades 3 to 4 than is true on non-Magnet campuses. The student achievement growth on Magnet campuses at other grade levels is not significantly different from that of students on non-Magnet campuses. If a mean of the mean growth scores is calculated, we find that overall, student achievement growth on Magnet campuses exceeds that on non-Magnet campuses (0.924 for Magnet campuses and 0.887 on non-Magnet campuses). It is also interesting to note that the low end of the range of achievement growth for Magnet campus students is consistently higher than the low end of the range for non-Magnet campuses.

It is apparent that Magnet Schools have a positive effect on student advancement in basic skills while offering unique opportunities in special study areas not generally available to elementary school students.

In an attempt to determine the progress made by the Houston Independent School District in meeting goals derived from the fall, 1974 Needs Assessment Survey, a Second Needs Assessment Survey was conducted during the spring of 1977. A total of 2,931 students, parents, teachers, and administrators representing Faculty and Parent Advisory Councils and student groups at all school levels responded to the survey. Of these 2,931 respondents, 43% were teachers, 40% were parents, and 12% were students. The remaining 5% were administrators. This discussion deals with the five items on the survey relating to Magnet Schools and the responses of students, parents, and teachers to these items.

A brief section toward the end of the Second Needs Assessment Survey was introduced in the following manner:

> The Houston Independent School District implemented the Magnet School concept in 1975-76 school year. Please indicate your feelings about the Magnet School Program by placing an "X" in the appropriate box.

Following this introduction were five items to which the respondents were asked to indicate whether they agreed, disagreed, or had no opinion. The responses of each group, students, parents, and teachers, are discussed in the following paragraphs. When interpreting these responses, it is important to remember that the persons who were asked to respond are those who should be most knowledgeable about District programs and services.

Table IX presents the distribution of responses for all respondents to Magnet School items on the Second Needs Assessment Survey.

Table IX

Distribution of Responses to Magnet School Items By All Respondents

	Agree	Disagree	No Opinion
The public has been provided adequate information about Magnet Schools.	50%	39%	10%
Magnet Schools function well as an alternative desegregation plan.	57%	19%	23%
Magnet Schools have provided quality instructional programs.	58%	7%	32%
Magnet Schools have met the special needs and interests of HISD students.	53%	14%	31%
Magnet Schools are functioning well overall.	48%	10%	39%

It is obvious in Table IX that the students, parents, and teachers are not in overwhelming agreement with any of the five questions regarding Magnet Schools. A key to this situation may be found in the first item dealing with the provision of adequate information about Magnet Schools. A sizable proportion (39%) of the respondents indicated that they felt that the public had not been provided adequate information about Magnet Schools. This lack of information about Magnet Schools has apparently left a large proportion of the respondents without the data necessary to make informed judgments about the aspects of Magnet School operation covered in the remaining four items.

The responses of students, parents, and teachers to Magnet School items on the HISD Second Needs Assessment Survey indicated that regarding Magnet Schools:

1. inadequate information has been provided the public;
2. they function well as an alternative desegregation strategy;
3. they provide quality instructional programs;
4. they meet students' special needs and interests; and
5. they are functioning well overall.

The disturbing aspect of the responses to these items is the large percentage of responses indicating lack of information necessary to make informed judgments about the Magnet School program. Problems in recruitment and enrollment of Magnet School students may be a reflection of the lack of information indicated by these responses. It appears that additional District efforts in the area of Magnet School information dissemination to the public will be necessary to assure continued public support for the program.

The Houston Independent School District obligated itself to provide intensive staff development support to Magnet School instructional staff members. Planning and implementation of this support has been delegated to the District's Staff Development Department. Summer staff development workshops were held at several times during the summer of 1977, but the majority of the workshops was held during the two weeks preceding the official beginning of the school year. The workshops followed two general formats. Some of the workshops were, in fact, mini-courses offered through the Staff Development Department. Many of the workshops were developed and presented by instructional coordinators to the individual instructional staff of their program or to the instructional staffs of a group of related programs. Each workshop was assigned a Staff Development Department course number, so it was impossible to distinguish those workshops offered by the Staff Development Department from those offered by instructional coordinators. The statements which follow are based on a summation across all workshops of participants' responses to items on the standard Staff Development Department feedback instrument.

The standard feedback instrument used by the Staff Development Department to gather teacher reaction to various workshop sessions consists of twenty-five questions. The first ten questions deal with the physical facilities in which the workshop was conducted and the content of the workshop. The remaining questions deal with the participants' reactions to the facilitator and his or her instructional techniques. This report will deal only with the ten questions concerning the content and location of the summer Magnet School workshops and the four questions concerning participants' reactions to the session facilitators. The remaining eleven questions, those concerning the facilitators' instructional techniques, had too few valid responses for the results to be interpreted meaningfully.

A total of 1005 teacher feedback forms were completed and returned for analysis. The number of valid responses to individual items on the feedback form ranged from 872 (item 14) to 1002 (item 1). All workshop feedback forms were analyzed to determine the distribution of participant responses across possible response categories. There is a great likelihood that some teachers may have participated in more than one workhop and therefore may have returned more than one feedback form. We have no valid way of determining the actual number of teachers who participated in the summer inservice for Magnet School teachers from the data supplied by the Staff Development Department.

In the section of the feedback form titled Course Evaluation, questions 1, 2, 3, 4, 5 and 9 were concerned with the content of the workshop sessions. Questions 6, 7, 8 and 10 were concerned with the location of the workshop sessions, including timing, etc. Participants' responses to these items indicated that the content of the workshops was such that the participants (1) profited much from the workshop (mean rating 4.23 on a 5 point scale), (2) learned many specific skills (mean rating 4.02), (3) had their enthusiasm stimulated (mean rating 4.16), (4) gained many insights and concepts (mean rating 4.03), (5) had their understanding somewhat expanded (mean rating 3.85) and (6) would definitely recommend the workshop they attended to others (mean rating 1.96 on a 2 point scale). Participants' responses to the questions concerning the location of the workshops indicated that the participants felt that (1) the facilities where the workshops were held were very adequate (mean rating 4.07 on a 5 point scale), (2) the materials utilized in the workshop were very good (mean rating 4.13), (3) the length of the workshop was about right (mean rating 1.89 on a 3 point scale) and (4) the workshop was conveniently located (mean rating 1.96 on a 2 point scale).

The section of the standard Staff Development Department feedback form titled Instructor Evaluation consisted of 15 questions, only four of which are considered. The remaining eleven questions, those dealing with instructional techniques used, had too few responses to be meaningfully interpreted. Participant responses to the four questions considered indicated that (1) the instructors were very knowledgeable (mean rating 4.41 on a 5 point scale), (2) the instructors were very interesting (mean rating 4.37), (3) the participants would take other workshops from the instructors (mean rating 1.96 on a 2 point scale) and (4) the workshops would not have been more meaningful if conducted by another instructor (mean rating 1.18 on a 2 point scale).

Overall, the summer inservice workshops for Magnet School teachers were judged by the participants to have been taught by very good instructors who covered very good content in good facilities.

SUMMARY

The goal of the Magnet School program is to provide high quality alternative educational programs which attract students from all geographic and ethnic sectors of the District. Data reported by the individual Magnet Schools, and substantiated by program audits and site visits by personnel from the Districts' Program Planning, Research and Evaluation Department, indicate that the Magnet School program has been successful in accomplishing its stated goal. A total of forty-six alternative educational programs have been established and operated during the two years of the Magnet School program. The forty-six programs represent all grade levels pre-K through 12, and range from fine arts programs to extended instructional day programs and programs for the academically able student.

During 1976-77 the Magnet Schools were able to accomplish 195 (84.4%) of their 231 proposed program objectives. This level of achievement is 3% higher than was true in 1975-76 and speaks well of the quality of the education programs made available through the Magnet School project as does data related to basic skills growth of Magnet School students. The high quality of individual programs has received much comment from out-of-district visitors. Unfortunately, students, parents and teachers feel that they do not have adequate information about Magnet schools.

A total of 56,462 students were impacted by Magnet School programs. Total enrollment in the Magnet School programs was 12,011 students. The ethnic makeup of this enrollment was 38.2% black, 28.4% Mexican-American, and 33.3% others. Considering all students who benefited from lowered campus pupil/teacher ratios, the total number of students impacted by the Magnet School program is 27.8% of the District's total enrollment of over 206,000 students.

The Magnet School project, along with other District efforts, has resulted in a reduction in the number and percent of ethnically isolated schools in the Houston Independent School District. The number and percent of students attending ethnically isolated schools has been reduced significantly. Students transferring to Magnet Schools have been provided free, though not always convenient, transportation to school and home again. Students attending Magnet Schools represent a tri-ethnic cross section of students in the District. The Magnet School project instructional staff was fairly represenative, ethnically, of the instructional staff of the District as a whole.

We feel that Magnet Schools have several general characteristics. Seven of these general characteristics are listed below.

1. In a Magnet School both the teachers and the students get turned on to education and they produce more and better than ever before.

2. The Magnet School must not be placed in a building with anything less than a super principal, a principal who can run a regular school so efficiently that he can spend many hours a day working, assisting, directing his Magnet School Program.

3. Parents are all important. It is the parent's decision whether or not a child is enrolled in a Magnet School. The parents have every right to be fully informed of the strengths and weaknesses of the program prior to the student's enrollment and they must be kept fully informed at all times of what their children are accomplishing.

4. A Magnet School is not a panacea for desegregation purposes; a Magnet School affects only the campus on which it operates, and for educational purposes, the students, program, and teachers must be very carefully matched one to the other.

5. Magnet Schools result in integration not desegregation. The goal of desegregation is to place students of different ethnic groups on one campus. The goal of integration is to bring children of like interests and needs together, regardless of their ethnic groups. This is what occurs in Magnet Schools. There are no black children or white children in Magnet schools. They are all Magnet School children. They all have the same interests and most have about the same abilities.

6. Magnet Schools are expensive, yet they allow a district to more efficiently use its resources through the centralization of specific resources on specific campuses.

7. Most importantly, Magnet Schools work. It may appear that their direct impact on the ethnic makeup of the district is minimal, but the peacefulness, public relations, and quality of education in a district are all improved when a Magnet School Program is institutued.

We in Houston know that our Magnet School Program exemplifies these seven characteristics. We feel that the program is very successful. During this school year, approximately 56,000 students out of our district of 207,000 students will benefit either directly or indirectly from the Magnet School Program in Houston. We believe that this is a significant impact. As a result of our Magnet School Program, the number of schools classified as ethnically isolated has become statistically significantly smaller when compared to the number of schools so classified when HISD was under a forced pairing and busing order. The enrollment in our district has stabilized and in fact risen since the institution of the Magnet School Program. The entire educational personality of the Houston Independent School District has changed. We feel changed for the better, and we feel our community supports us in that belief.

The Magnet School project has met all goals set forth for it. Expansion of the Magnet School project and refinement of existing programs will offer more students an opportunity to participate in what has proven to be an exciting, innovative and successful program.

E214